

## CLAIMS

1. Use of a modulator of the expression or activity of the E2IG4 gene for the manufacture of a drug for the treatment of diabetes or its complications, 5 obesity or insulin resistance.
2. Use according to Claim 1 in which the modulator is an activator of the activity of the E2IG4 protein.
- 10 3. Use according to Claim 1 in which the modulator is an inducer of the expression of the E2IG4 gene.
4. Use according to Claim 1 in which the modulator is an inhibitor of the activity of the E2IG4 protein.
- 15 5. Use according to Claim 4 in which the modulator is an anti-E2IG4 protein blocking antibody.
6. Use according to Claim 1 in which the modulator is a repressor of the 20 expression of the E2IG4 gene.
7. Use according to Claim 6 in which the modulator is an antisense nucleic acid of the E2IG4 gene.
- 25 8. Use according to Claim 6 in which the modulator is an interfering RNA (iRNA) blocking the expression of the E2IG4 gene.
9. Pharmaceutical composition comprising the E2IG4 protein in association 30 with a pharmaceutically acceptable vehicle.
10. Use of the product of the E2IG4 gene for the manufacture of a drug for the treatment of diabetes or its complications, obesity or insulin resistance.

11. Pharmaceutical composition comprising a nucleic acid coding for the E2IG4 protein, in association with a pharmaceutically acceptable vehicle.
- 5 12. Use of a nucleic acid coding for the E2IG4 protein for the manufacture of a drug for the treatment of diabetes or its complications, obesity or insulin resistance.
- 10 13. *In vitro* method of screening or identifying compounds useful in the treatment of diabetes or its complications, obesity or insulin resistance, in which at least one test compound is brought into contact with a cell capable of expressing the E2IG4 gene, and the level of expression of this gene is evaluated, a modulation of the level of expression of this gene being indicative of a compound useful in the treatment of diabetes or its complications, obesity or insulin resistance.
- 15 14. Method according to Claim 13 in which the cell is a cell transfected with a nucleic acid comprising the sequence SEQ ID No. 1.
- 20 15. *In vitro* method of screening or identifying compounds useful in the treatment of diabetes or its complications, obesity or insulin resistance, in which at least one test compound is brought into contact with a cell capable of expressing a reporter gene associated as an operator with the promoter of the E2IG4 gene, and the level of expression of the reporter gene is evaluated, a modulation of the level of expression of this gene being indicative of a compound useful in the treatment of diabetes or its complications, obesity or insulin resistance.
- 25 16. Method according to one of Claims 13 to 15 in which an increase in the level of expression of the E2IG4 gene or the reporter gene is indicative of a compound useful in the treatment of diabetes or its complications, obesity or insulin resistance.
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17. *In vitro* method for the diagnosis or prognosis of diabetes, obesity or insulin resistance in a subject, in which the level of expression of the product of the E2IG4 gene is determined in a subject's biological sample, a modification of the level of expression compared with a control subject's biological sample being indicative of the development or an increased risk of development of diabetes, obesity or insulin resistance in the said subject.
18. Method according to Claim 17 in which the level of expression of the product of the E2IG4 gene is determined by evaluating the amount of E2IG4 protein in a subject's biological sample.
19. Method according to Claim 17 or 18 in which a decrease in the level of expression of the product of the E2IG4 gene compared with the control subject is indicative of the development or an increased risk of development of diabetes, obesity or insulin resistance.
20. Anti-E2IG4 protein monoclonal or polyclonal antibody.
21. Repressor of the expression of the E2IG4 gene which is an antisense of the E2IG4 gene.
22. Repressor of the expression of the E2IG4 gene, the said antisense of the E2IG4 gene being an interfering RNA (iRNA) blocking the expression of the E2IG4 gene.